



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,202	12/16/2003	Henning Gerder	71163	5742

23872 7590 02/20/2007  
MCGLEW & TUTTLE, PC  
P.O. BOX 9227  
SCARBOROUGH STATION  
SCARBOROUGH, NY 10510-9227

EXAMINER
----------

LOPEZ, AMADEUS SEBASTIAN

ART UNIT	PAPER NUMBER
----------	--------------

3771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/20/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

10/737,202

Applicant(s)

GERDER ET AL.

Examiner

Amadeus S. Lopez

Art Unit

3771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 12/16/03.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Applicant's arguments, see pages 7-12, filed 11/21/2006, with respect to the rejection(s) of claim(s) 1-21 under 35 USC 112, second paragraph and USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Meier (2004/0182386).

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1, 2, 4, 6-12, 14, 17, 18, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (US 2004/0182386).

As to claim 1, Meier discloses a respirator breathing gas tube (3a) for supplying a user with breathing gas, the breathing tube, comprising: a sensor means (5) at an end

of the breathing gas tube facing away from the respirator; a signal line extending along the breathing gas tube and designed to transmit signal of the sensor means to the respirator (paragraph 42); a contactless interface between the signal line and the sensor means (paragraph 24).

As to claim 2, Meier discloses a breathing gas tube wherein the signal line comprises a fiberoptic waveguide (paragraph 24).

As to claim 4 and 14, Meier discloses a breathing tube wherein the signal transmission between the respirator and the sensor means takes place bi-directionally via a data transfer (Paragraph 0040, 0041, and 0043; Fig. 1 showing arrows to and from both the sensor means 5a and the CPU to the CPAP).

As to claims 6 and 8, Meier discloses a breathing gas tube wherein the contactless interface includes a first inductive interface (paragraph 0024; states that signals can be transmitted optically in the form of infrared signals).

As to claim 7, Meier discloses a breathing gas tube wherein the first inductive interface is designed to transmit a supply voltage to the sensor means in addition to the signals (paragraph 0024 and 0043).

As to claim 9, Meier discloses a breathing gas tube wherein the sensor means is designed as a combination for a measurement of humidity (paragraph 37-39, 41, and 43).

As to claim 10, Meier discloses a breathing gas wherein a second inductive interface is provided between the breathing gas tube and the respirator (paragraph 0014 and 0024).

As to claim 11, Meier discloses a process for using respiration system with a respirator, the process comprising the steps of: providing a sensor means (5) for sensing breathing gas characteristics (paragraph 0009; 0010;0013;0015; and 0016); providing a breathing gas tube (3a); providing a contactless interface between the breathing gas tube and the sensor for transmitting sensor signals (paragraph 24).

As to claim 12, Meier discloses a process further comprising: disposing the sensor means (5; Fig. 1) at an end of the breathing gas tube facing away from the respirator providing a signal line (paragraph 0042) extending along the breathing gas tube and transmitting signals of the sensor means to the respirator (paragraph 0009, 0012, and 0024 wherein it states that the sensor means can be located in conjunction with the breathing mask which would be located away from the respirator) with the contactless interface being provided between the signal line and the sensor means (paragraph 0024).

As to claim 17, Meier discloses a breathing gas tube wherein the sensor means is designed as a combination for a measurement of humidity (paragraph 37-39, 41, and 43).

As to claim 18, Meier discloses a respiration system, comprising: a respirator/ventilator (1); a breathing gas tube (3a) for supplying a user with breathing gas, the breathing tube being connected to said respirator/ventilator at a proximal end and the breathing gas tube having a distal end; a sensor (5) at a distal end of the breathing gas tube (Fig. 1); a signal line extending along said breathing gas tube for

Art Unit: 3771

transmitting signals of the sensor to said respirator/ventilator (Paragraph 0042); a contactless interface between said signal line and said sensor (paragraph 0024).

As to claim 21, Meier discloses a respiration system wherein the contactless interface includes one of an inductive interface and an infrared interface (paragraph 0024).

Claims 3, 4, 13, 14, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (US 2004/0182386) in view of Bahr (2001/0017134).

As to claim 3, Meier discloses a breathing gas tube with all the limitations of the claim with the exception of wherein the signal line is a two-wire line. Bahr discloses a conduit for connecting a fluid transfer device to a patient utilizing a two-wire line for electrical signal transmission. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal line disclosed by Meier to be a two-wire line such as that disclosed by Bahr because it is well known in the art to be an effective configuration for transmitting data signals in breathing conduits.

As to claim 4 and 14, Meier discloses a breathing gas tube with all the limitations of the claim with the exception of a breathing gas tube wherein it is explicitly stated that the signal transmission between the respirator and the sensor means takes place bidirectionally via a data transfer. Bahr discloses a breathing gas tube (2) wherein the signal transmission between the respirator and the sensor means take place bidirectionally (paragraph 0027). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal line of

Meier et al to transmit signals between the respirator and the sensor means bidirectionally via a data transfer because it is well known in the art to be an effective configuration for signal transmission as disclosed by Bahr.

As to claim 13, Meier discloses a process wherein the signal line comprises one of a fiberoptic waveguide (paragraph 0024). Meier does not disclose that the signal line is a two-wire line. Bahr discloses a conduit for connecting a fluid transfer device to a patient utilizing a two-wire line for electrical signal transmission. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal line disclosed by Meier to be a two-wire line such as that disclosed by Bahr because it is well known in the art to be an effective configuration for transmitting data signals in breathing conduits.

As to claim 16, Meier discloses a breathing gas tube wherein the contactless interface includes an inductive interface (paragraph 0016; paragraph 0024 states that signals can be transmitted optically in the form of infrared signals).

As to claim 19, Meier discloses a respiration system wherein the signal line comprises one of a fiberoptic waveguide (paragraph 0024). What is not disclosed by Meier is a two-wire line establishing bidirectionally signal transmissions between the respirator/ventilator and the sensor. Bahr discloses a breathing gas tube (2) wherein the signal transmission between the respirator and the sensor means take place bidirectionally (paragraph 0027). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal line of Meier et al to transmit signals between the respirator and the sensor means

Art Unit: 3771

bidirectionally via a data transfer because it is well known in the art to be an effective configuration for signal transmission as disclosed by Bahr. Bahr discloses a conduit for connecting a fluid transfer device to a patient utilizing a two-wire line for electrical signal transmission. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal line disclosed by Meier to be a two-wire line such as that disclosed by Bahr because it is well known in the art to be an effective configuration for transmitting data signals in breathing conduits.

Claims 5, 15, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier (US 2004/0182386) in view of Bahr (2001/0017134) in further view of Edirisuriya et al.

As to claims 5, 15, and 20, Meier /Bahr disclose a breathing gas tube and process with the exception of wherein the two-wire line is additionally designed as a tube heater. Edirisuriya et al. disclose a heater wire located within a breathing tube, "the heater wire itself could be used to carry electrical signals from measuring sensors (Paragraph 0070). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the signal wire of Meier et al to further function as a heater wire to humidify gas delivered to a user.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amadeus S. Lopez whose telephone number is (571) 272-7937. The examiner can normally be reached on Mon-Fri 8:00AM-4:30PM.



Art Unit: 3771

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Amadeus S Lopez  
Examiner  
Art Unit 3771  
February 15, 2007

ASL



JUSTINE R. YU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

2/15/07